

INCIDENT ACTION PLAN (IAP) COVER PAGE - ICS 200

Operating Period #3 – 3/24/05 8:00 AM – 8:00 PM

Incident Name: Isomerization Unit Explosion	Date Prepared: 3/24/2005	Operational Period: 3	
		Date	Time
Incident Location: ISOM	Start:	3/24/05	0800
	End:	3/24/05	2000

WEATHER FORECAST FOR OPERATIONAL PERIOD:

Wind Speed:	<u>10 MPH</u>	Wind Direction:	<u>E</u>
Air Temperature:	<u>63F</u>	Precipitation:	Rain <input type="checkbox"/> Snow <input type="checkbox"/>
Ceiling:	<u>Partly Cloudy</u>	Visibility:	<u>10 miles</u>
Wave Height:	<u> </u>	Wave Direction:	<u> </u>
Current Speed:	<u> </u>	Current Direction:	<u> </u>
Water Temperature:	<u> </u>	River Stage:	<u> </u>

TIDES:

<u>3:51 P</u>	(am/pm)	High Tide(s)	<u>6:20 A</u>	(am/pm)	Sunrise
8:51 P	(am/pm)	Low Tide(s)	6:33 P	(am/pm)	Sunset

GENERAL SAFETY MESSAGE:

Concern is for people on the unit involved with incident and affected by incident.

Use proper PPE and caution when responding

Essential people only allowed at the scene; cautious approach to recovery area

All actions on site will be coordinated with Onsite Safety Officer before entering hot zone

ATTACHMENTS TO IAP

- | | |
|--|--|
| <input checked="" type="checkbox"/> IAP Cover Page (ICS 200) | <input checked="" type="checkbox"/> Field Assignment Safety Message (ICS 204S) |
| <input checked="" type="checkbox"/> Incident Objectives (ICS 202) | <input checked="" type="checkbox"/> Incident Communications Plan (ICS 205) |
| <input checked="" type="checkbox"/> IMT Organization & Contact Chart (ICS 203) | <input checked="" type="checkbox"/> Medical Plan (ICS 206) |
| <input type="checkbox"/> Field Assignment (ICS 204) | <input type="checkbox"/> Air Operations Summary (ICS 220) |
| <input type="checkbox"/> Field Assignment Change Sheet (ICS 204C) | <input checked="" type="checkbox"/> Location Maps (ICS 201) |
| <input checked="" type="checkbox"/> Field Assignment Environmental Message(ICS 204E) | <input checked="" type="checkbox"/> Other- Site Safety Plan |

INCIDENT ACTION PLAN APPROVED BY:

Incident Commander (IC): <u>Rich Peltier</u>	Company Name: <u>BP</u>
Federal On-Scene Coordinator (FOSC): <u>Karen McCormick</u>	Agency Name: <u>EPA</u>
State On-Scene Coordinator (SOSC): <u>Walter Rodriguez</u>	Agency Name: <u>TCEQ</u>
Local On-Scene Coordinator (LOSC): _____	Represented By: _____

Prepared By: John Isgren

ICS Position: Planner

Phone: 409-771-3122

STRATEGIC OBJECTIVES STATUS BOARD (ICS 202)

INCIDENT NAME: Isomerization Unit Explosion_____

OPERATIONAL PERIOD: Period #3 0800 - 2000 hrs_____

OBJECTIVES FOR CURRENT OPERATIONAL PERIOD (DATE) 3/24/05_____ (TIME) 0800_

1. Account for all personnel / cautious approach to recovery area
2. Secure source of fire / secure area
3. Continue support of personnel and families at hospitals
4. Visual inspection of remaining site units for mechanical integrity potentials due to pressure wave.
5. Assess incident – Establish response persons / plan / need organization chart for next period
6. Develop Asbestos run off plan for rain/weather forecasted for this weekend
7. Manage external / internal communications
8. Local message established
9. Coroner center set up for families
10. Claims hotline for community
11. Establish core team for long-term recovery and transition plan of IMT to this new team

OBJECTIVES FOR NEXT OPERATIONAL PERIOD (DATE) 3/24/05_____ (TIME) 2000_____

1. Account for all personnel / cautious approach to recovery area
2. Continue incident investigation
3. Establish secure boundary around incident site
4. Assess incident – Establish plan / need organization for next period
5. Manage external / internal communications
6. Establish plan for demobilization of IMT

ORGANIZATION ASSIGNMENT LIST (ICS 203)

1. INCIDENT NAME: West Plant Explosion_____

2. OPERATIONAL PERIOD COVERED BY PLAN: Period #3 (3/24/05)

Start Time/Date: 0800 3/24/05_____ **End Time/Date:** 2000 3/24/05_____

3. COMMAND SECTION:

Incident Commander	Rich Peltier_____
Unified Commanders	Karen McCormick (EPA)_____
	Walter Rodriguez (TCEQ)_____
Deputy Incident Commander	Bob Bradshaw_____
Safety Officer	Tom Halaska_____
Information Officer	Susan Dio_____
Liaison Officer	Randall Browning_____
Law Officer	Tracey Rogers James North_____
Human Resources Officer	Melanie Hughes_____

5. PLANNING SECTION:

Chief	Dave Schilling/ Jhana Enders (EPA)_____
Situation Unit	Norine Stein, Jhana, Heather Vail
Resource Unit	John Isgren Stacy Stenerson_____
Demobilization Unit	Tim Wilk_____
Safety & Health Unit	Mary K Alberts_____
Environmental Unit	Dan Lutz, Guy Hagen, Watson Dupont, Denis Malloy

Ongoing Process Unit

6. LOGISTICS SECTION:

Chief	Jorge Mata_____
Service Branch	Don Chapman_____
Communications Unit	Gary Elbert_____
Medical Unit	Dr Boswell_____
Food Unit	_____
Support Branch	Mark Polite_____

7. FINANCE/ADMINISTRATION SECTION:

Chief	Jody Wilson_____
Time Unit	Carole Engelder_____
Procurement Unit	Susan Thibodeaux, Melanie Lee
Compensation/Claims Unit	Robert Knight_____
Legal	Mary Rogers, Jim Gillespie_____
Human Resources Group	Melanie Hughes Paula Sharp
Cost Unit	_____

4. OPERATIONS SECTION:

Chief	Clay Reeves/Russell Mhlbauer_____
On-scene Commander	Mike Gibson Ken Kirk_____
Site Safety/Env. Coord.	James Ferguson_____
Staging Area Manager	James Hudson_____
Documentation Aide	_____

a. Branch I: Air Monitoring

Director	Garner Team – Curtis Galloway_____
Division/Group	_____
Division/Group	_____
Division/Group	_____
Division/Group	_____

b. Branch II: Search and Rescue

Director	CIMA Mutual Aid_____
Division/Group	_____
Division/Group	_____

c. Branch III: Remediation

Director	EPA-Valmichael Leos_____
Division/Group	_____
Division/Group	_____
Division/Group	_____
Division/Group	_____

d. Branch IV:

Director	Weston (EPA contractor) Chad Hall
Division/Group	_____

e. Branch V:

Director	_____
Division/Group	_____
Division/Group	_____
Division/Group	_____
Division/Group	_____
Division/Group	_____

SAFETY STATUS BOARD (ICS 204S)

Operating Period #2 3/24/05

SAFETY OFFICER ON-SCENE? ☒ YES ☐ NO NAME OF SAFETY OFFICER: Greg Perez

Area Isolated? Barricade in progress ☒ Yes ☐ No

Hazard Control Zones Established? ☒ Yes ☐ No

Hazard Control Zones Secured? ☒ Yes ☐ No

Medical Screening Established? ☒ Yes ☐ No

Personnel Training Levels Verified? ☐ Yes ☐ No

Decontamination Area(s) Established? ☒ Yes ☐ No

First Aid Areas Established? ☒ Yes ☐ No

LEVEL OF PPE REQUIRED: _____

SPECIFIC CHEMICAL HAZARDS AND AVOIDANCE/MITIGATION MEASURES:

CHEMICAL HAZARDS		AVOIDANCE/MITIGATION MEASURES
Benzene	Pentane, Bleach	Sample Water / Sewer Rundown to water treating plant individual monitoring
Hexane	C7	Test emergency response and employees in area - urine & blood samples
Straight RU	Algaecide	Monitor air – Benzene / H2S / Flammables
H2S	Acids	
Asbestos	Caustic NaOH	
Light Raffinate	Natural Gas	Initial testing showed no VOC or benzene
	Fuel Gas	Monitor air Benzene/H2S/Flammables
Butane	Lubricating Oils	

SPECIFIC PHYSICAL HAZARDS/MITIGATION MEASURES:

PHYSICAL HAZARDS	AVOIDANCE/MITIGATION MEASURES
Twisted pipe rubble	Rope off area
Asbestos	Wet down all insulation prior to disturbing, wear respiratory protection, pass through decon before leaving
Contaminated Hydrocarbons soaked soil	Vacuum truck pools of hazardous chemicals decontaminate/properly dispose soil
Fire from re-ignition sources	Fire watch on standby, apply water to area as needed
Electrical shock	Isolate electrical systems (complete)
	Fire watch on stand-by
Biohazards	Garner services will be remediating all biohazards

INCIDENT-SPECIFIC SITE SAFETY PLAN:

☐ In Preparation

Estimated Time of Completion: _____

☒ Completed and Approved

CONTACT FOR MORE INFORMATION: Eddison Arnold/Tom Halaska

ENVIRONMENTAL STATUS BOARD (ICS 204E)

INCIDENT NAME: Isom Explosion FIELD ASSIGNMENT NO. _____

OPERATIONAL PERIOD:

Start Time/Date: 8:00 pm March 24, 2005 End Time/Date: 20:00 3/24/05

DIVISION/GROUP: _____

SPECIFIC ENVIRONMENTAL CONCERNS AND AVOIDANCE/MITIGATION MEASURES:

ENVIRONMENTAL CONCERNS	AVOIDANCE/MITIGATION MEASURES
Spills (facility wide)	Assessment
Naphtha spill @ Isom	Fire control
S/D of other units – need advance notification?	When understood, notify TCEQ & GCHD
Waste disposal – contaminated PPE, etc.	Waste Disposal Plan
Fire water run-off	Contain to WWTP / sample
Air emissions	Fence line monitoring
Asbestos Runoff due to expected rain this weekend	Developing Plan

CONTACT FOR MORE INFORMATION: Watson Dupont

COMMUNICATIONS PLAN (ICS 205)

1. INCIDENT NAME: Isom Explosion

2. OPERATIONAL PERIOD COVERED BY PLAN:

Start Time/Date: March 24, 2005 8:00 am End Time/Date: March 24, 2005 8:00 pm

Plan based on standard emergency procedures

3. COMMAND NETWORK

Source	Frequency	Channel	Phone/Fax No.	Assignment
Phone				
Internet				

4. TACTICAL NETWORK

Source	Frequency	Channel	Phone/Fax No.	Assignment
Cell Phones				
Radio				

5. SUPPLY NETWORK

Source	Frequency	Channel	Phone/Fax No.	Assignment
Phone				

6. OTHER NETWORKS (e.g., CRISIS)

Source	Frequency	Channel	Phone/Fax No.	Assignment

7. APPROVED BY: _____ TIME/DATE: _____

MEDICAL PLAN (ICS 206)

1. INCIDENT NAME: Isom Explosion

2. OPERATIONAL PERIOD COVERED BY PLAN:

Start Time/Date: March 24, 2005 8:00 End Time/Date: March 24, 2005 8:00 pm

3. FIRST AID STATION(S)

LOCATION	DIVISION/GROUP(S) SERVED	RADIO/PHONE
Rehab for Firefighters and recovery workers	ERT Channel Industrial Mutual Aid (CIMA)	

4. GROUND AMBULANCE SERVICE(S)

LOCATION	DIVISION/GROUP(S) SERVED	RADIO/PHONE

5. AIR AMBULANCE SERVICE(S)

LOCATION	DIVISION/GROUP(S) SERVED	RADIO/PHONE

6. HOSPITALS AND TREATMENT FACILITIES

LOCATION	DIVISION/GROUP(S) SERVED	RADIO/PHONE
Clear Lake Regional Medical Center	Contractors	281-338-3110
Mainland Medical	Contractor/BP	409-938-5000
UTMB John Sealy	Contractor/BP	409-772-1011
Memorial Herman Hospital	1 Contractor	713-704-4000

7. SUMMARY OF MEDICAL EMERGENCY PROCEDURES

HR, Contractor, and/or Leadership Team member located at all hospitals for family support

8. APPROVED BY: _____ TIME/DATE: _____

[illegible]

[illegible][illegible]

INITIAL INCIDENT BRIEFING - ICS 201-1 (page 1 of 5)
INCIDENT MAP

Incident Name: Isomerization Explosion	Date Prepared: 3/24/2005
Incident Location: ISOMERIZATION UNIT	Time Prepared: 0800

REQUIRED FORMS ATTACHED:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Incident Map (ICS 201-1) | <input checked="" type="checkbox"/> Resources Summary (ICS 201-4) |
| <input checked="" type="checkbox"/> Summary of Incident and Current Actions (ICS 201-2) | <input checked="" type="checkbox"/> Site Safety and Control (ICS 201-5) |
| <input checked="" type="checkbox"/> TRT Organization (ICS 201-3) | |

INCIDENT MAP: (Insert graphic or type text.)

Incident is in the Isomerization Unit area of the Texas City Refinery. Explosion occurred at ISOMERIZATION UNIT unit. See attached for staging map



WEATHER: Sunny, dry and warm		LEGEND:	
		Incident Command Post	
		Groups	
		Incident Area	Water (lakes, oceans)
Temperature: 75 degees Wind Chill:		Staging Area	Rivers
Wind Speed: 15 mph Wind Direction: SE		Containment Sites	Roads
Precipitation (rain, snow, etc.): Partly Cloudy		Strike Teams	Above-ground Pipeline
		Task Forces	Below-ground Pipeline
Sunrise: 6:20 AM Sunset: 6:33 PM		Divisions	Control Zones
High Tide: NA Low Tide: NA		Decontamination	Boom

Prepared By: John Isgren	ICS Position: Planning	Phone: 4097713122
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Send a Copy To: <input type="checkbox"/>	<input type="checkbox"/>
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INITIAL INCIDENT BRIEFING - ICS 201-2 (page 2 of 5)
SUMMARY OF INCIDENT AND CURRENT ACTIONS

Incident Name: Isomerization Explosion	Date Prepared: 3/24/2005
Incident Location: ISOMERIZATION UNIT	Time Prepared: 0800

DESCRIPTION OF INCIDENT: C3 FIRE FROM T-401 (DB 102B DNG)

Cause If Known: Explosion F20 Blowdown Stack

What Happened: ☒ Fire ☒ Gas Leak ☒ Explosion ☐ Spill ☒ Medical ☐ HAZMAT ☐ Other

Extent of Involvement: Isomerization

Source: F20 Blowdown Drum Name/Type: F20

DESCRIPTION OF SPILLED/ EMITTED MATERIAL:

Type: Explosion – butane/propane **Quantity:** Unknown

INCIDENT POTENTIAL:

- ☒ Incident Under Control.
- ☐ Incident currently not under control, but can be handled with available resources.
- ☒ Incident will require additional resources (e.g., contractors, mutual aid).
- ☒ Incident will likely generate significant public affairs/community relations issues.

SAFETY CONSIDERATIONS:

Injuries: 83 Fatalities: 15 known Unaccounted: 1

Chemical Hazards: Possible fire re-ignition, debris, and asbestos

Physical Hazards: Fire and debris

Level of PPE: Fire gear class C/D

RESPONSE: GENERAL

PROBLEMS	SOLUTIONS
CHEMICAL HAZARDS	Use proper PPE
INJURIES (FATALITIES)	EMT, ambulances, life flight, hospitals
COMMUNITY IMPACT/INVOLVEMENT	LEPC, local police department involved
SITE REOPTIMIZATION	3 PM 3/23 telecon with IST - ongoing
ENVIRONMENTAL	Control situation, monitor
USGC / WORLD MARKET IMPACT	Unknown, re-optimize and get units up

IMPACTS: ☒ Land ☒ People ☒ Property ☒ Environment ☒ Operations ☒ Community

☐ Water Sensitive Areas Impacted or Threatened: ☐ Yes ☒ No

Location of Areas: _____

ASSISTANCE NEEDED:

Pasadena Search and Rescue

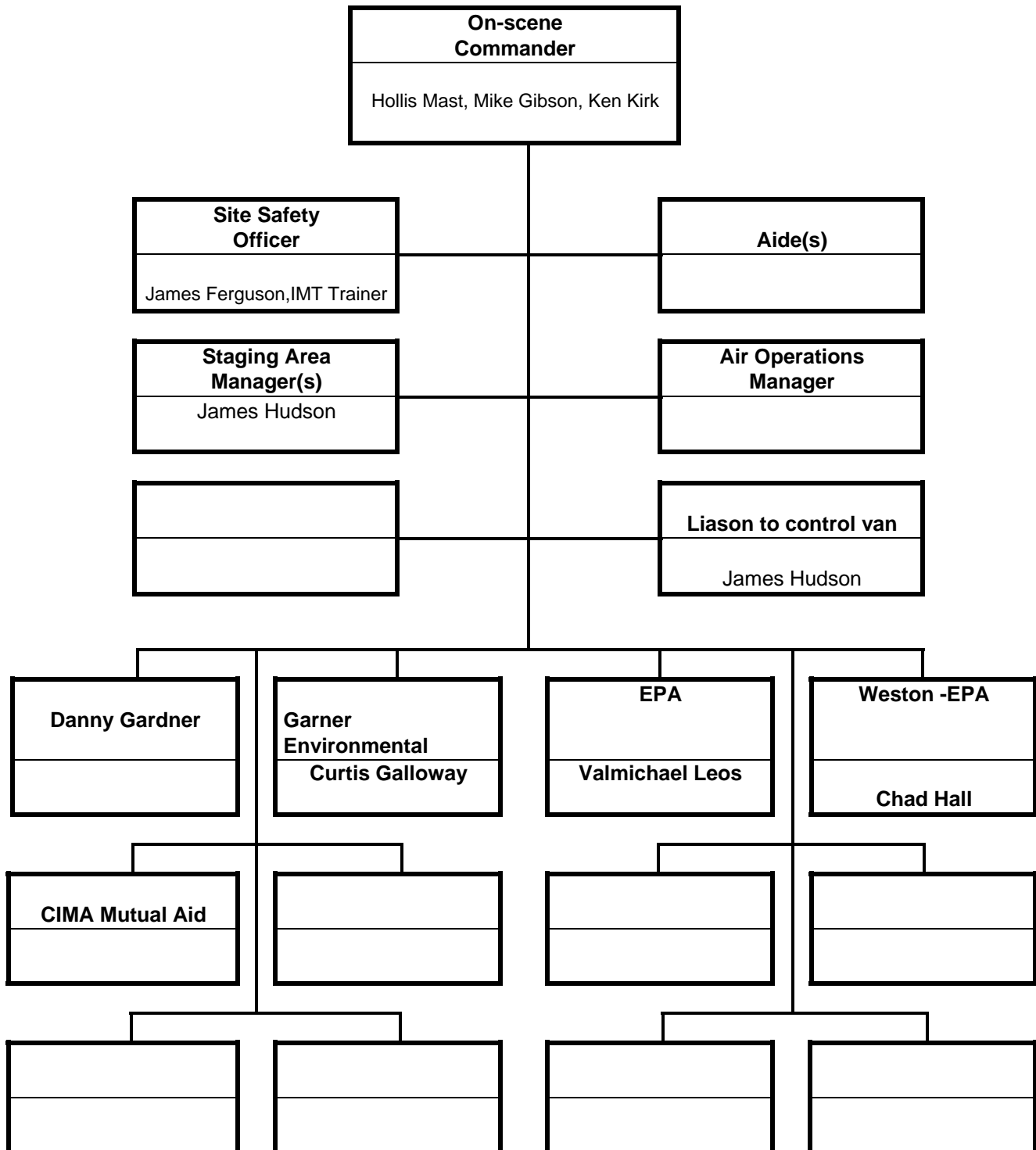
(CIMA) Channel Industrial Mutual Aid

Prepared By: John Isgren	ICS Position: Planning	Phone: 4097713122
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INITIAL INCIDENT BRIEFING - ICS 201- 3 (page 3 of 5)
Tactical Response Team Organization

Incident Name:	Isomerization Explosion	Date Prepared:	3/24/2005
Incident Location:	ISOMERIZATION UNIT	Time Prepared:	0800

LOCATED AT THE TACTICAL COMMAND POST (TCP)



Prepared By: John Isgren

ICS Position: Planning

Phone: 409-771-3222

INITIAL INCIDENT BRIEFING - ICS 201-4 <i>(page 4 of 5)</i> RESOURCES SUMMARY

Incident Name:	Isomerization Explosion	Date Prepared:	3/24/2005
Incident Location:	ISOMERIZATION UNIT	Time Prepared:	0800

[illegible]

Prepared By: John Isgren	ICS Position: Planning	Phone: 409-771-3122
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INITIAL INCIDENT BRIEFING - ICS 201-5 (page 5 of 5)
SITE SAFETY AND CONTROLS

Incident Name: Isomerization Explosion	Date Prepared: 3/23/2005
Incident Location: ISOMERIZATION UNIT	Time Prepared: 1400

Site Control

Has an on-scene Safety Officer been designated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Has an Incident Command Post been established?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have all personnel been accounted for? Injuries: 83 Fatalities: 15 Unaccounted: 1	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are people injured or trapped? (Attach Company Injury/Incident Report, as appropriate)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are untrained/unorganized people on-scene or involved in rescue operations?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Has an Isolation Perimeter been established?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Has a Staging Area been established?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Has Site Access Control been established?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Hazards

Have you determined the need for: proactively monitoring

Air monitoring Community around plant	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Onsite characterization need more info (VOC, BZ, H2S, SO2)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Offsite characterization not seeing anything	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Are there immediate signs of potential hazards:

Markings, colors, placards, or labels indicating hazards?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Unidentified liquid or solid products visible?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Vapors visible? Color: ____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Odors or smells?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Spill area conditions: wet due to spray from dust mitigation <input type="checkbox"/> Dry	<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Icy
Electrical lines down?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Ignition sources nearby (sparks, flames, vehicles)? assumed	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Physical hazards (holes, caverns, deep ditches, fast-moving water) nearby? debris/damage	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is local traffic a potential problem?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
As you approach the scene from the upwind side, are there changes in status of any of the above?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Hazards Mitigation

Are TRT units safely positioned? Emergency escape route provided (see below)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you established and communicated the location of Hazard Control Zones?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you identified PPE requirements and levels? A: ____ B: ____ C: ____ D: <u>X</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you identified other safety equipment and procedures (see below)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are all entry operations following the "Two in / Two Out" guidelines?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you established EMS / Medical Stations?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you defined decontamination requirements (see below)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have you established decontamination facilities?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Remarks (list Emergency Escape Routes, Decon Requirements, Equipment, etc., as appropriate):

Decon trailer established at South of Warehouse
 First aid established at Gates 42 (Contractor)
 Benzene monitoring for affected employees and responders
 All responders are wearing badge monitors

Prepared By: Tom Halaska	3/24/2005 / 0800	Approved By: Rich Peltier
Site Safety Officer	Date Time	On-scene Commander

Site Safety Plan

A. SITE DESCRIPTION

Date 3/24/2005 5:06 PM

Location ISOM Unit, BP Texs City

Hazards Benzene; VOC; H2S; SO2; Fire; Asbestos; Slippery surfaces; compomised structure, platforms, piping; biohazards; trapped hydrocarbon that could be release if disturbed and present potential fire hazards; X-ray crew radioactive sources on site, but secured

Area affected ISOM

Surrounding population West Plant

Topography na

Weather conditions Fair temprature in the 70s F, SE @ 10 mph @9:30AM

Additional information Humidity 70%, visibility 10 miles

B. **ENTRY OBJECTIVES** - The objective of the initial entry to the contaminated area is (to describes actions, tasks to be accomplished; i.e., identify contaminated soil; monitor conditions, etc.) contain fire Continue search and retrieve personnel. Begin initial site assessment and investigaiton.

C. **ONSITE ORGANIZATION AND COORDINATION** - The following personnel are designated to carry out the stated job functions on site. (Note: One person may carry out more than one job function.)

On Scene Commander Bruce Sanders/John McLemore

Site Safety Officer Joe Hockless/Greg Perez

FEDERAL AGENCY REPS

- ☒ EPA Karen McCormick
- ☒ OSHA Kimi Scarpa, Chi Bui
- ☒ Chemical Safety Board in route
- ☐ U.S. Coast Guard
- ☐ National Response Center (NRC) notification by phone
- ☐ Other
- ☐ Other

STATE AGENCY REPS

- ☒ TCEQ Walter Rodriguez
- ☐ General Land Office
- ☒ State Emergency Response Center (SERC) notification by phone

LOCAL AGENCY REPS

- ☒ TC Emergency Management Bruce Claussen
- ☐ TC Mayor

CONTRACTOR(S)

- ☒ Industrial Mutual Aid System (IMAS)
- ☐ Marathon
- ☐ Dow
- ☐ ISP
- ☒ Channel Industrial Mutual Aid (CIMA)
- ☒ Other Garner Envriental, Curtis Galloway/Chad Smith
- ☒ Other Chad Hall, Weston Solutions for EPA
- ☐ Other

All personnel arriving or departing the site should log in and out. All activities on site must be cleared through the On Scene Commander.

D. ONSITE CONTROL ISSC

ISSC has been designated to coordinate access control and security on site. A safe perimeter has been established at(distance or description of controlled area) All streets around ISOM unit barricades No unauthorized person should be within this area.

The Tactical Command Post and staging area have been established at south side of warehouse
The prevailing wind conditions are SE at 09:30. The Tactical Command Post is located is upwind from the Exclusion Zone.

Control boundaries have been established, and the Exclusion Zone (the contaminated are), hotline, Contamination Reduction Zone, and Support Zone (clean area) have been identified and designated as follows: (describe boundaries and/or attach map of controlled area)
Exclusion Zone is west half of unit to Catalyst Warehouse. Decon Area is west of NDU

These boundaries are identified by:(marking of zones, i.e., red boundary tape - hotline; traffic cones - Support Zone, etc.) Security established restricted access to scene. Fire crew established hot around west side of ISOM unit. Physical barricades are in place that encompasses the ISOM and NDU.

E. HAZARD EVALUATION

The following substance(s) are known or suspected to be on site. The primary hazards of each are identified.

- Substances Involved (chemical name)	- Concentrations (if known)	- Primary Hazards (e.g., toxic, inhalation, skin)
- Benzene	- 0.5% in feed, potential for exposure above 1 ppm	- toxic, inhalation, carcinogenic
- VOC	- possibly above 300 ppm	- irritant, inhalation
- H2S	- possibly above 1 ppm	- toxic, inhalation
- SO2	- possibly above 1 ppm	- toxic, inhalation
- Asbestos	- wetted, not a concern - clean-up, potential for exposure above PEL	- toxic, carcinogenic, inhalation

The following additional hazards are expected on site:(i.e., slippery ground, uneven terrain, etc.)
Slippery surfaces; compromised structure, platforms, piping; biohazards; trapped hydrocarbon that could be release if disturbed and present potential fire hazards; contractor inspection trailer with radiation sources need to be secured

F. PERSONAL PROTECTIVE EQUIPMENT

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

- Location	- Job Function	- Level of Protection
- Exclusion Zone	- Reponse Team/ Recovery Team	- <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input checked="" type="checkbox"/> Other
- Contamination Reduction Zone (wading pools and Decon Trailer set	- EMT	- <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input checked="" type="checkbox"/> Other

- up)
- | | | | | | | |
|---|---|---|--------------------------------|----------------------------|----------------------------|----------------------------|
| - | - | - | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| | | | <input type="checkbox"/> Other | | | |
| - | - | - | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| | | | <input type="checkbox"/> Other | | | |
| - | - | - | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| | | | <input type="checkbox"/> Other | | | |

Level A Fully-encapsulating suit, SCBA, disposable coveralls

Level B Splash gear, SCBA

Level C Disposable coveralls, half-mask air-purifying respirator w/ organic vapor/acid gas/HEPA filters

Level D

Other Asbestos abatement team - tyvek suits and full-face respirators with HEPA filters. Tyvek suits will be taped.

Search crew: rubber boots, tyvek, rubber gloves, full-face respirators with HEPA filters. Tyvek suits will be taped.

Note: Garner to handle biohazard remediation.

The following protective clothing materials are required for the involved substances:

Substances (chemical name)	Involved	Type of chemical material (e.g., Viton)	protective
na			

If air purifying respirators are authorized not required based on initial monitoring, organic vapor/acid gas cartridges/ HEPA filters for recovery team is the appropriate cartridge for use with the involved substances and concentrations. A competent individual has determined that all criteria for using this type of respiratory protection have been met.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY OFFICER AND THE ON SCENE COMMANDER.

G. ONSITE WORK PLANS

Work party(s) consisting of _____ persons will perform the following tasks:

- | | |
|---|--------|
| - Function | - Task |
| - On-Scene Commander | - |
| - Work Party #1 | - |
| - Work Party #2 | - |
| - Rescue Team | - |
| - Rescue Team for IDLH entries (contractor) | - |
| - Decontamination Team | - |
| - Rehab Team (Rest Firefighters on standby) | - |
| - Other | - |
| - Other | - |
| - Other | - |

The work party(s) were briefed on the contents of this plan at _____.

H. COMMUNICATION PROCEDURES

Radio Channel Fire 1 and Fire 3 has been designated at the radio frequency for personnel in the Exclusion Zone. All other onsite communications will use normal channels.

Personnel in the Exclusion Zone should remain in constant radio communication or within sight of the On Scene Commander. Any failure of radio communication requires an evaluation of whether personnel should leave the Exclusion Zone.

Radio Channel Fire 1 is the emergency signal to indicate that all personnel should leave the Exclusion Zone. In addition, a loud hailer is available if required.

The following standard hand signals will be used in case of failure of radio communications:

Hand gripping throat Out of air, can't breathe
Grip partner's wrist or Leave area immediately
both hands around wrist
Hands on top of head Need assistance
Thumbs up OK, I am all right, I understand
Thumbs down No, negative

Telephone communication to the Command Post should be established as soon as practicable. The phone numbers are (409) 771-7010, (409) 771-7362, FAX in Command Post out of order, alternate Fax X22465 .

I. DECONTAMINATION PROCEDURES

Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated if required. The standard level a decontamination protocol shall be used with the following decontamination stations:

- a. Shower off Tyvek, remove, and shower body
- b.
- c.

Emergency decontamination will include the following stations:

Current stations: Miken and CIMA Decon trailer set up on the south side of the warehouse.

Note: Garner to handle biohazard remediation.

The following decontamination equipment is required: Miken and CIMA Decon trailer

Soap and water will be used as the decontamination solution.

J. SITE SAFETY AND HEALTH PLAN

1. Joe Hockless/Greg Perez is the designated Site Safety Officer and is directly responsible to the On Scene Commander for safety recommendations on site.
2. All available site EMT including BP and contractors are the qualified EMTs on site., available on scene by Radio Channel Fire 1 and Fire 3 . Have been briefed on the situation, the potential hazards, and the substances involved.

A map of alternative routes to this facility is available at Tactical Command Post

Local ambulance service is available on scene at Radio Channel Fire 1 . Whenever possible, arrangements should be made for onsite standby.

First aid equipment is available on site at the following locations:

First aid equipment	Ambulance, Medical Dept, Gate 42 First Aid Trailer
Emergency eye wash	available on unit; decon trailer available
Emergency shower	available on unit; decon trailer available
Other	

Emergency medical information for substances present:

- Substance	- Exposure	- First	Aid
- (chemical name)	- Symptoms	- Instructions	
- Fuel gas	- See MSDS	- See MSDS	

- Natural gas	- See MSDS	- See MSDS
- Benzene	- See MSDS	- See MSDS
- Butane	- See MSDS	- See MSDS
- Hydrogen sulfide (H2S)	- See MSDS	- See MSDS
- Light raffinate	- See MSDS	- See MSDS
- Pentane	- See MSDS	- See MSDS
- Spent Caustic	- See MSDS	- See MSDS
- MEA	- See MSDS	- See MSDS
- Turbinol Select ISO 46	- See MSDS	- See MSDS
- Hexane	- See MSDS	- See MSDS
- C1-C4 Hydrocarbons	- See MSDS	- See MSDS
- C5+C6 Isomerization	- See MSDS	- See MSDS
- Naphtha	- See MSDS	- See MSDS
- Light Virgin Naphtha	- See MSDS	- See MSDS
- Hydrotreated Naphtha	- See MSDS	- See MSDS
- Nalco 73134	- See MSDS	- See MSDS
- Nalco 73181	- See MSDS	- See MSDS
- Nalco 73272	- See MSDS	- See MSDS
- Sodium Hypochlorite 7-15%	- See MSDS	- See MSDS
- Asbestos	- See HSE Policy PR-11	- See HSE Policy PR-11
-	- See MSDS	- See MSDS
-	- See MSDS	- See MSDS
-	- See MSDS	- See MSDS

List of emergency phone numbers:

- Agency/Facility	- Phone #	- Contact
- Police	- 911	-
- Fire	- 911	-
- Hospital	- 911	-
- Airport	- na	-
- Public Health Advisor	-	-
- Other	-	-
- Other	-	-
- Other	-	-
- Other	-	-

3. Environmental Monitoring

The following environmental monitoring instruments shall be used on site (cross out if not applicable) at the specified intervals.

- Substance (chemical name)	- Instrument	- Purpose
- Benzene	- UltraRae	- Community monitoring
- VOC	- AreaRae	- Internal perimeter monitoring
	- UltraRae	

- | | | |
|------------|-----------|---------------------------------|
| - H2S | - AreaRae | - Community monitoring |
| - SO2 | - AreaRae | - Internal perimeter monitoring |
| - Asbestos | - 25 mm | - |
| - | - | - |

4. Emergency Procedures (should be modified as required for incident)

The following standard emergency procedures will be used by onsite personnel. The Site Safety Officer shall be notified on any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed.

Personnel Injury in the Exclusion Zone: Upon notification of an injury in the Exclusion Zone, the designated emergency signal on Radio Channel Fire 1 shall be sounded. All site personnel shall assemble at the decontaminated line. The rescue team will enter the Exclusion Zone (if required) to remove the injured person to the hotline. The Site Safety Officer and On Scene Commander should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the Support Zone. The onsite EMT shall initiate the appropriate first aid, and contact should be made for an ambulance and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms is determined.

Personnel Injury in the Support Zone: Upon notification of an injury in the Support Zone, the On Scene Commander and Site Safety Officer will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel, operations may continue, with the onsite EMT initiating the appropriate first aid and necessary follow up as stated above. If the injury increases the risk to others, the designated emergency signal Radio Channel Fire 1 shall be sounded and all site personnel shall move to the decontamination line for further instructions. Activities on site will stop until the added risk is removed or minimized.

Fire/Explosion: Upon notification of a fire or explosion on site, the designated emergency signal on Radio Channel Fire 1 shall be sounded and all site personnel assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

Personal Protective Equipment Failure: If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

Other Equipment Failure: If any other equipment on site fails to operate properly, the On Scene Commander and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions taken.

The following emergency escape routes are designated for use in those situations where egress from the Exclusion Zone cannot occur through the decontamination line:(describe alternate routes to leave area in emergencies)

In all situations, when an onsite emergency results in evacuation of the Exclusion Zone, personnel shall not reenter until:

1. The conditions resulting in the emergency have been corrected
2. The hazards have been reassessed.
3. The Site Safety Plan has been reviewed.
4. Site personnel have been briefed on any changes in the Site Safety Plan.

5. Personal Monitoring

The following personal monitoring will be in effect on site:

Personal exposure sampling: Personal ging into the hotzone will wear an organic vapor monitoring badge while in the hot zone

Medical monitoring: The expected air temperature will be high of 75 F. If it is determined that heat stress monitoring is required (mandatory if over 70°F) the following procedures shall be followed: personnel will take appropriate rest braks and drink water. If exposures to benzene is high, biological samples (urine) wll be collected at the end of the work shift.

All site personnel have read the above plan and are familiar with its provisions.

-	Job Title	-	Name	-	Signature
-	Site Safety Officer	-	Joe Hockless/Greg Perez	-	
-	On Scene Commander	-	Bruce Sanders/John McLemore	-	
-	Other Site Personnel	-		-	
-	IMT Safety Officer	-	Tom Halaska/Eddison Arnold	-	
-	IMT Operations Section Chief	-	Joe Hockless/Lester Brown	-	

Prepared by: Mary K. Alberts/Dennis Malloy, IMT Planning Section, Health & Safety Unit
Date: 3/23/05

Family Communication Plan

BP to provide stand by EMS personnel staging for the families in the event it is required at the Doyle Convention Center.

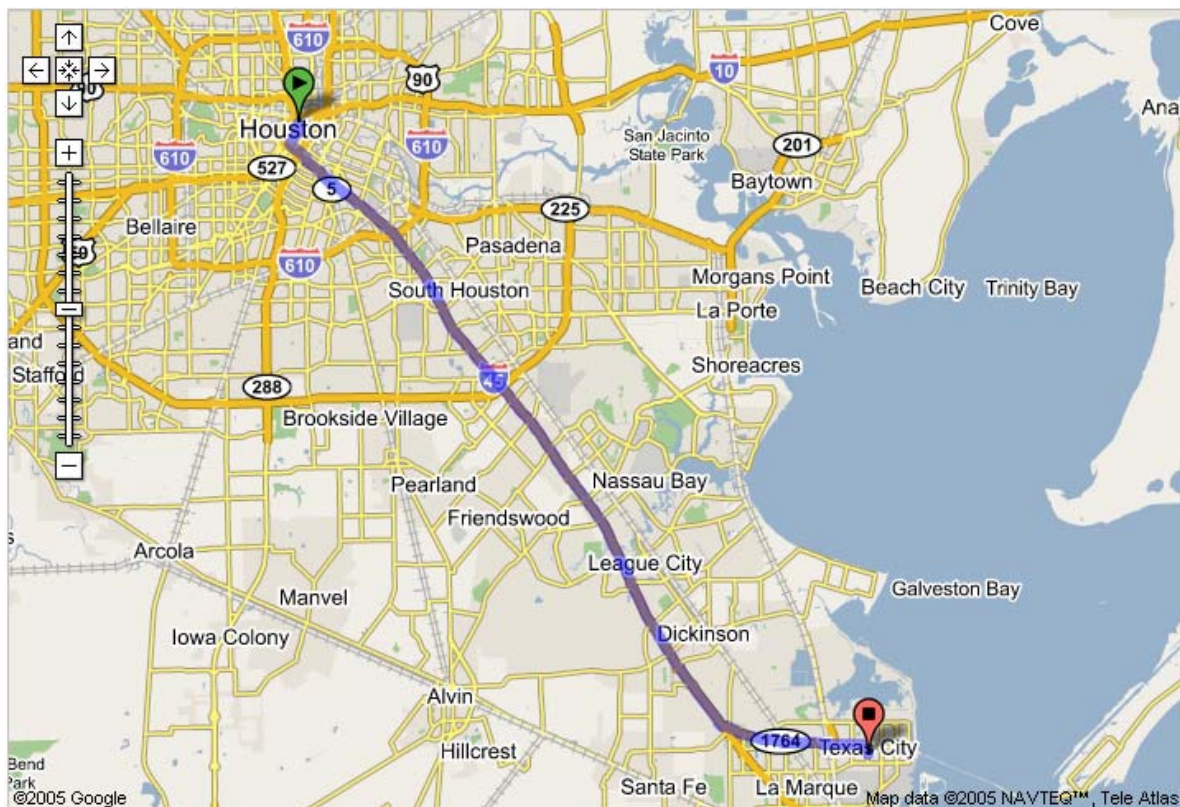
Get supplies for families to fill out Medical Examiners Forms.

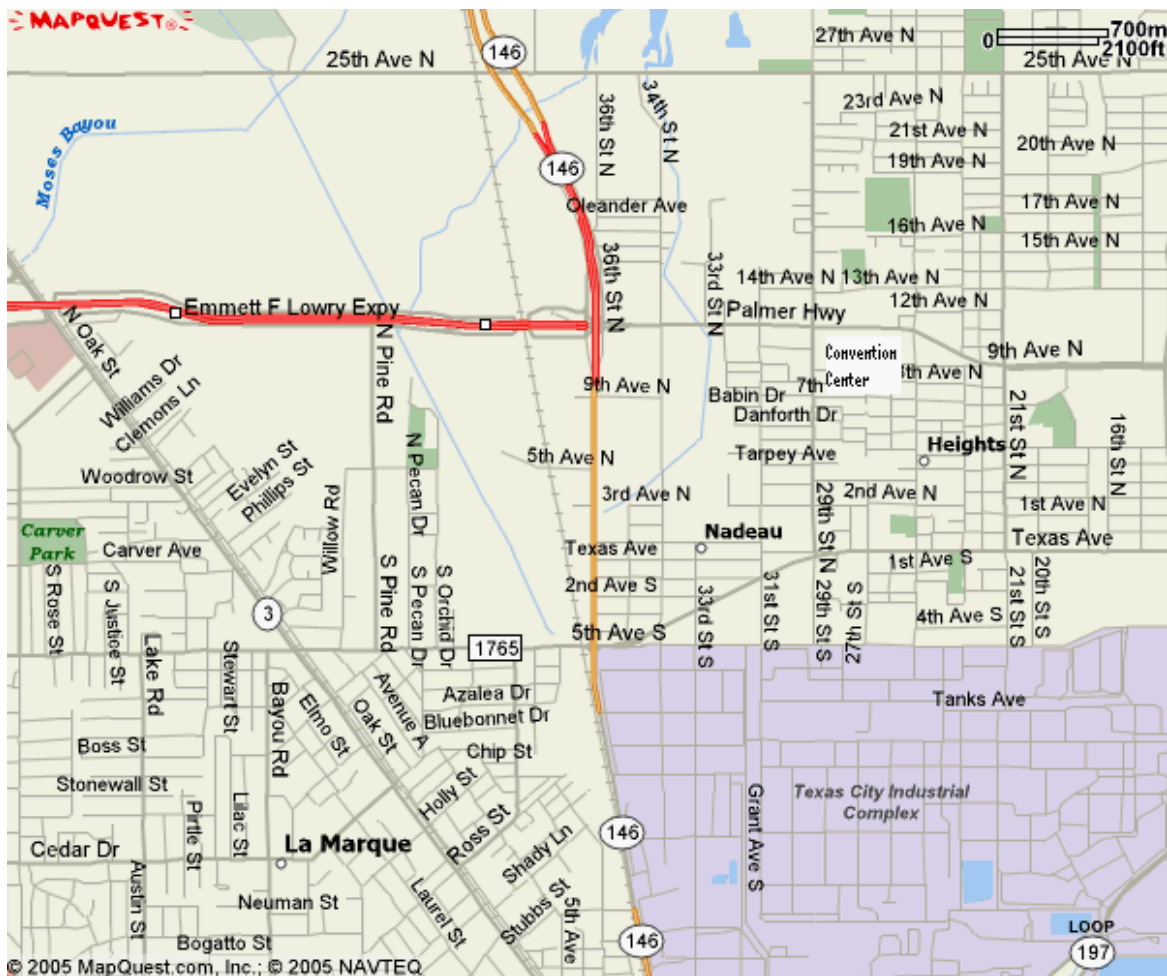
Thursday 24March2005

0500 Texas City Police Department to have personnel staged at Doyle Convention Center

0600 Bruce Clawson with Texas City Emergency Management will be opening the Doyle Convention Center

0630 JE Merit will begin calling families to inform them of the Medical Examiner's Staging area at the **West side of the Doyle Convention Center on 21st Street requesting that the families not arrive until 0900.** The Medical Examiner's office has requested that the families bring any items that will assist in identification of the employee (i.e. photographs, Dentist's name and contact info, any identifying birth marks or tattoos, jewelry.....).





- From I 45, go east on FM 1764 – Emmett Lowry Parkway (exit 16) – go 5.8 miles
- Continue on FM 1764 through Hwy 146 to 21st St. FM 1764 becomes 9th Ave. – go 1.4 miles
- Turn RIGHT on 21st Street North – go 0.3 miles
- Doyle Convention Center is at the corner of 9th Ave and 21st St

0630 Hamilton Caters will set up food at Doyle Convention Center

0700 Medical Examiner requested to have BP (Jim Steinkamp), JE Merit and FGS (Frank Walker) Representative at Medical Examiner's office for a meeting to review their work process. Medical Examiner's office is located behind Mainland Center Hospital at West End of new parking lot.

BP to stage at Doyle Convention Center:

HR Tracy Rosette Time: 0700

HR John Penny Time: 0700

HR Jim Steinkamp Time: 0800

EAP Will be at Doyle Time: 0700

Senior Management Representative Ken Pannazzo Time: 0900

Attorneys

PG&A

0800 GE Services HR Rep will arrive at Staging Area

0800 Medical Examiner's office to have someone at Doyle Convention Center to hand out forms to the families for needed information.

0900 Two fourteen passenger Shuttle Vans to arrive at Doyle Convention Center on west side of building to transport families to Medical Examiner's office as requested by Medical Examiner. One family will be transported to the Medical Examiner's office at a time to manage privacy. Medical Examiner will be requesting families as they identify personnel.